



**19" Wide LCD Monitor**

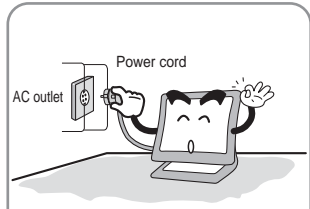
# **User Manual**

**Model : L190w**


# Precautions

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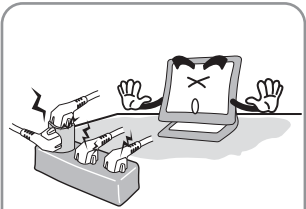
**Warning** : The following information will help you avoid the risk of electric shock, serious injury or death.



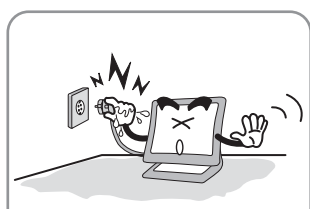
Plug the power cord into a properly grounded outlet. There is the risk of electric shock.




If you hear a noise or smell smoke from the computer or adaptor, unplug the power cord immediately, and call the service center. There is the risk of electric shock or fire.



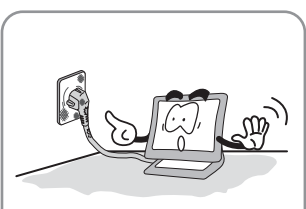
Do not overload an electrical outlet with too many devices. There is the risk of fire.



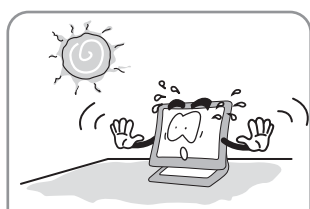
Do not unplug from the outlet by pulling the power cord or when your hands are wet. There is the risk of electric shock or fire.



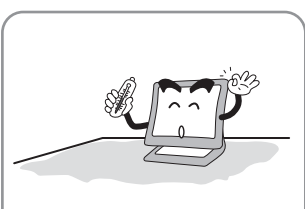
Do not bend the power cord excessively nor place heavy objects on it. Keep children and pets away from the power cord as they may damage the power cord. There is the risk of electric shock or fire.



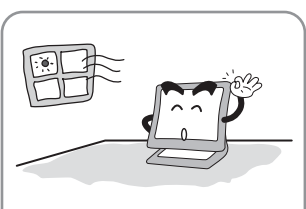
Do not use a damaged power cord or plug. Make sure the plug fits snugly into the outlet. There is the risk of electric shock or fire.



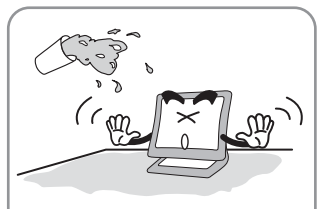
Do not expose the monitor to the direct sun light.



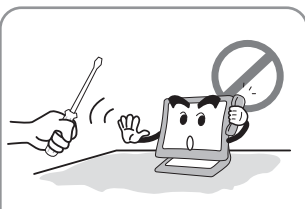
Keep the monitor away from high temperature, humidity, and dust.  
■ Operating environment  
=10~40 degrees Celsius.  
■ Operating environment  
=20~80 relative humidity.



Do not block the fan louvers. There is the risk of fire or damage to the monitor.




Do not allow any object or liquid to enter inside the monitor. There is the risk of electric shock, fire or damage to the monitor.




Do not attempt to disassemble, fix or modify the monitor. There is the risk of electric shock or fire.


**Caution** : The following information will help you avoid the risk of minor or moderate injury or damage to the monitor.




Use a proper voltage/current level indicated.




Do not clean the LCD with abrasive chemicals. There is the risk of damage to the LCD.



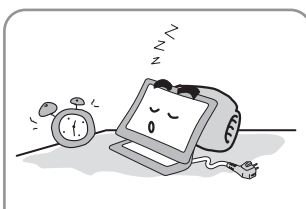
Do not scratch and damage the LCD with sharp objects.



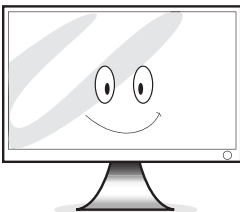
Keep the monitor away from objects and electrical appliances that may generate electromagnetic fields.




Place the monitor on a flat, stable surface. The monitor may fall and there is the risk of damage or injury.




Unplug the power cord when the monitor is not in use for a long period of time.




LCD Monitor



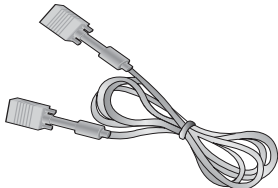
Stand




To assemble, press the pedestal down into the stand until it locks in position.



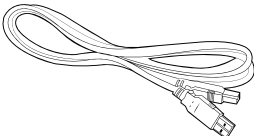
Power Cord



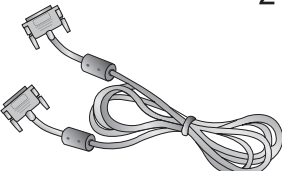
15-pin D-Sub Cable



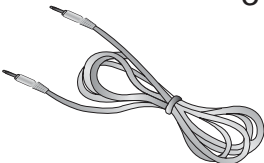
Install CD / Quick guide



USB Cable <sup>\*1</sup>




24pin DVI Cable <sup>\*2</sup>



Audio Cable <sup>\*3</sup>

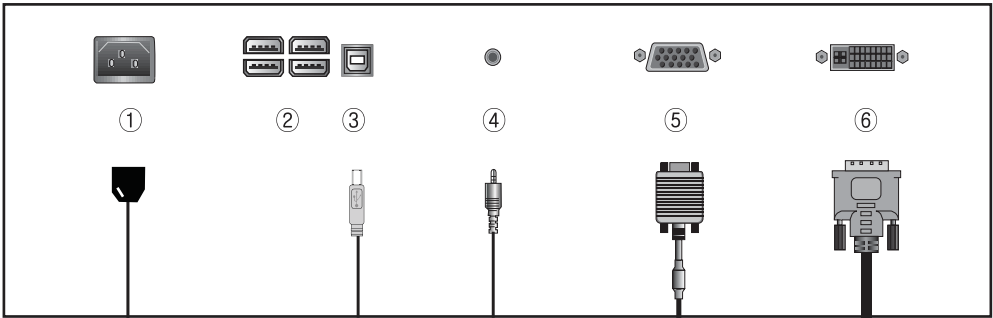
\*1 : For USB Model Only.  
\*2 : For DVI Model Only.  
\*3 : For Audio Model Only.



Please make sure the following items are included with your monitor.  
If any items are missing, contact your dealer.

**Notice** Use only the cables included with the monitor

Setting up the LCD monitor



No.	Name	Cable connections
1	Power	Power Cord
2	USB Downstream Port (4) (Option)	To connect another USB Device*1
3	USB Upstream Port (Option)	USB to PC *1
4	AUDIO IN	AUDIO Cable *3
5	VGA	15-pin D-Sub Signal Cable
6	DVI (Option)	DVI-D Cable*2


\*1 : For USB Model Only.  
\*2 : For DVI Model Only.  
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Plug & Play

The adoption of the new VESA Plug and Play solution eliminates complicated and time consuming setup. It allows you to install your monitor in a Plug and Play compatible system without the usual hassles and confusion. Your PC system can easily identify and configure itself for use with your display. This monitor automatically tells the PC system its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so the PC system can automatically configure itself to use the flat panel display.

Warm-up Time

All LCD monitors need time to become thermally stable whenever you turn on the monitor after the monitor has been turned off for a couple of hours. Therefore, to achieve more accurate adjustments for parameters, allow the LCD monitor to warm up for at least 30 minutes before making any screen adjustments.



**Notice** When the condition of the screen is not good, please press the button "AUTO".  
(This function allows you to remove any horizontal noise and clear the screen image for VGA input only.)

Buttons & functions

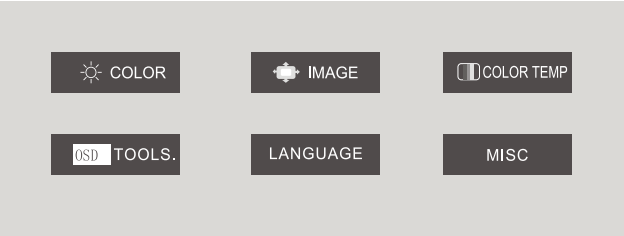
Button	Function description	Hot key setting
MENU	Opens OSD MENU window. Chooses icons.	
▼/🔊	Moves down icon choice bar. Decreases value of chosen icon.	Sound control *1
▼	Moves down icon choice bar. Decreases value of chosen icon.	
▲/INPUT	Moves up icon choice bar. Increases value of chosen icon.	SOURCE change
AUTO/EXIT	Cancels chosen OSD MENU step by step. Closes OSD MENU.	Automatic setting
🔌POWER	turns on/off monitors.	
State Lamp	Indicates monitors' state. LED ON(green) in normal state. LED flicker(green off) in standby mode.	

\*1 : For Audio Model Only.

Functions

Hot key is a handy key to execute frequently used functions.

▼ Monitor & OSD screen settings



OSD screen selection and control procedures.

- 1. Press the “MENU” button to bring up the OSD screen.
- 2. Press the “▼/🔊(▼), ▲/INPUT” buttons to select the main option.
- 3. Press the “MENU” button after selecting the main option.
- 4. Bring up the sub-menu. Use the “▼/🔊(▼), ▲/INPUT” buttons to select the desired option.
- 5. Press the “MENU” button after selecting the desired sub-menu option.
- 6. Use the “▼/🔊(▼), ▲/INPUT” buttons to adjust the set value.
- 7. Pressing the “AUTO/EXIT” button three times saves and exits the setting mode.

\*Pressing the “ AUTO/EXIT” button moves back to the previous menu.

MAIN MENU ICON	MAIN MENU	SUB MENU	FUNCTION
🔆 COLOR	COLOR	BRIGHTNESS	Adjusts screen brightness.
		CONTRAST	Adjusts screen light and darkness.
🖥️ IMAGE	IMAGE	HORIZONTAL POSITION	Adjusts screen left or right.
		VERTICAL POSITION	Adjusts screen upwards or downwards.
		PHASE	Removes noise coming out horizontally on screen.
		CLOCK	Removes noise coming out vertically on screen.
🌡️ COLOR TEMP	COLOR TEMP	WARM	Screen colors turn mild.(6500K)
		COOL	Screen colors turn mild.(9300K)
		USER-DEFINED	Can adjust three colors( red, green and blue ) individually, if USER-DEFINED is selected.
🔧 OSD TOOLS.	OSD TOOLS	OSD H-POSITION	Adjusts OSD screen left or right.
		OSD V-POSITION	Adjusts OSD screen upwards or downwards.
🗨️ LANGUAGE	LANGUAGE		Select OSD languages ( 6 languages )
🔧 MISC	MISC	AUTO ADJUST	Automatically sets optimum screen. (Not available in DVI)
		AUTO GAIN	Automatically sets optimum color. (Not available in DVI)
		FACTORY RESET	User setting values return to factory setting values.
		VOLUME	Adjusts volume of sound level. *1
		SCALE	Adjusts screen ratio. (4:3, 16:10)

\*1 : For Audio Model Only.

Display Modes and frequency		
Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
640 x 480	31,47 kHz	60 Hz
	37,86 kHz	72 Hz
	37,50 kHz	75 Hz
720 x 400	31,47 kHz	70 Hz
800 x 600	35,16 kHz	56 Hz
	37,88 kHz	60 Hz
	48,08 kHz	72 Hz
	46,88 kHz	75 Hz
1024 x 768	48,36 kHz	60 Hz
	56,48 kHz	70 Hz
	60,02 kHz	75 Hz
1280 x 1024	67,98 kHz	60 Hz
	79,98 kHz	75 Hz
1440 x 900	55,40 kHz	60 Hz

Power Save

This monitor has a built-in power management system called PowerSave. This system saves energy by switching your monitor into a low-power mode when it has not been used for a certain period of time. The monitor automatically returns to normal operation when you press a key on the keyboard. For energy saving, turn your monitor OFF when it is not used, or when leaving it unattended for a long period.

State	Power consumption	LED Color
ON	Under 35W	Green
OFF	Less than 1W	Flickering (Green)

U.S.FEDERAL COMMUNICATIONS COMMISSION  
RADIO FREQUENCY INTERFERENCE STATEMENT  
INFORMATION TO THE USER

NOTE : This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

Changes or modification not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment. Connecting of peripherals requires the use of grounded shielded signal cables.

Problem	Solution
Abnormal colors appear. It is in black and white.	Reconnect the cable to PC. Insert the PC's video card correctly. Re-boot the PC. Set the video card again after referring to the video card manual.
The displayed screen position suddenly changes or tilts inward.	Use the screen control to adjust the displayed screen shape. Set the resolution and/or frequency on the video card (refer to the supported mode table). Differences in the signal period of the video card may cause changes in the displayed position from time to time. Use the screen control functions to correct the displayed screen position.
Displays 16 colors only. The color has changed after replacing the video card.	Windows ME/XP/Vista: Re-set the color from the Control Panel → Display → Setting. Re-install the video card driver.
Power indicator lamp blinks Green.	Monitor is in Sleep Mode
Cannot control the screen with the buttons on the front of the monitor.	Provide support website.
There are colored spots on the screen.	There may be a few colored (red, green, white, black) pixel spots on the screen during use. This is a natural characteristic in LCD panels. It is not a malfunction and does not affect the monitor's performance.
The power indicator lamp is off.	Check if the power cable is intact. Reconnect the power cable correctly if necessary.
The "No Signal" message appears on the screen.	Check if the connection between the PC and monitor is intact. Reconnect the cable correctly if necessary.
The "Out of Range" message appears on the screen.	The output signal from the video card exceeds the monitor's maximum resolution or frequency limit. Set the maximum resolution and frequency to suit the product limits.
The screen appears to be sliding downward.	Check the connection between the PC and monitor. Re-connect if necessary.
The screen is unclear.	Run the auto-adjusting function.
The screen appears unstable or flickers. The screen leaves shadows.	Check if the computer or video card output resolution and frequency is set within the limits. Re-set the screen display by referring to the resolution information and standard supported mode table.
The screen is too bright or dark.	Use the brightness or contrast controls to adjust the display.
The color on the screen is not uniform.	Use the color density control to set the color.
Lines appear on the screen and the screen flickers.	Turn off any cordless phones, hair dryers, electrical drills etc. that are in use.



**Caution** Use a soft dry cloth to clean the product.

Use a clean cloth with a special screen cleanser.

- Do not scratch the monitor panel with your fingernails or other sharp objects.
- Do not use flammable substances such as benzene or paint thinner on the product. Do not use a wet cloth.
- Do not use acetone, benzene or paint thinner on the product.

	Specification	L190w
LCD	Visible Screen Area	16.07 inch(H) x 10.05 inch(V) (19inch)
	Pixel Pitch	0.2835mm(H) x 0.2835mm(W)
	Recommended Resolution	1440 x 900@60Hz
	Maxium Visible Angle	160°/160°(H/V)
	Displayed Color	16.7M
	Brightness	300cd/m <sup>2</sup> (Typical)
	Contrast Ratio	1000:1
	Response Time	5 msec
Input Signal	Horizontal Frequency	30KHz - 83KHz
	Vertical Frequency	56Hz - 75Hz
	Video Signal	Analog RGB, DVI*2
	Connector	15pin D-SUB, USB*1, DVI-D*2, AUDIO*3
Power	Power Consumption	<35W (Max.)
	Stand by Power	<1W
	Input Power	AC:100V-240V 50/60Hz, 0.7A
Multimedia Speakers		2W x 2*3
Operating Environment		Operation: 10 to 40°C, humidity: 20-80%(non-condensing) Storage: -10 to 50°C, humidity: 10-90%(non-condensing)

※ The above specifications are subject to change without prior notice to improve performance

\*1 : For USB Model Only.

\*2 : For DVI Model Only.

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